

CLAIMS

1. A method of programming a plurality of detonators which are connected to a control unit by a communications bus, the method including the steps of using the control unit to address a first detonator to allow an exchange of data, on the communications bus, between the first detonator and the control unit and using the first detonator to enable a second detonator to be addressed by the control unit to allow an exchange of data, on the communications bus, between the second detonator and the control unit.
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2. A method according to claim 1 wherein the second detonator is used to enable a third detonator to be addressed by the control unit to allow an exchange of data, on the communications bus, between the third detonator and the control unit.
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3. A method according to claim 1 or 2 wherein the first detonator is addressable by the control unit only after a first enabling signal has been sent by the control unit to the first detonator.
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4. A method according to any one of claims 1 to 3 wherein the second detonator is addressable by the control unit only after a second enabling signal has been sent by the first detonator to the second detonator.
5. A method according to claim 4 wherein the second enabling signal is only sent once a first disabling signal has been sent by the control unit to the first detonator.
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6. A method according to any one of claims 1 to 5 wherein the first detonator is closest on the communications bus to the control unit.

7. A method according to any one of claims 1 to 5 wherein the first detonator is a predetermined one of the plurality of detonators and is directly addressable by the control unit.

8. A method of programming a plurality of detonators in sequence which includes the steps of exchanging data between a first detonator and a control unit using a communications bus to which all of the detonators are connected in parallel, disabling the first detonator from being addressed by the control unit, using the first detonator to enable a second detonator to be addressed by the control unit, exchanging data between the second detonator and the control unit using the communications bus, using the second detonator to enable a third detonator to be addressed by the control unit, and using the communications bus to disable the second detonator from being addressed by the control unit.

9. A method according to claim 8 wherein the first detonator is disabled by means of a first signal sent on the communications bus and, when the first detonator is disabled, the first detonator is used to enable the second detonator to be addressed by the control unit.

10. A method according to claim 8 or 9 wherein the first detonator is a predetermined one of the plurality of detonators and is directly addressable by the control unit.

11. A method according to claim 8 or 9 wherein the first detonator is closest on the communications bus to the control unit.

12. A blasting system which includes, a control unit, a communications bus which is connected to the control unit, a plurality of detonators which are connected in sequence to the communications bus along its length, and a daisy chain connection between the control unit and the detonators, and wherein, within the sequence of detonators, a first detonator makes use of the daisy chain connection to enable a second following detonator so that data can be exchanged between the control unit and the second detonator using the communications bus.

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13. A blasting system according to claim 12 wherein the first detonator is disabled by a first signal on the communications bus, from being addressed by the control unit, and the first detonator then enables the second following detonator to be addressed by the control unit.

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14. A blasting system according to claim 12 or 13 wherein data which is exchanged between each detonator and the control unit is selected from timing information which relates to the operation or initiation of the detonator; information on the status or an operation aspect of the detonator; testing information relating to the detonator; and detonator identity, address or category data.

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15. A blasting system according to any one of claims 12 to 14 wherein each detonator is individually addressable.

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16. A blasting system according to claim 15 wherein the first detonator is a predetermined one of the plurality of detonators and is directly addressable by the control unit.

17. A blasting system according to any one of claims 12 to 15 wherein the first detonator is closest on the communications bus to the control unit.